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Briefing Report to the Chairman,
Environment, Energy and Natural
Resources Subcommittee, Committee on
Government Operations, House of
Representatives

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January 1990

ENVIRONMENT, SAFETY, AND HEALTH

Status of DOE's Reorganization of Its Safety Oversight Function

94-20784



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United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

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January 30, 1990

The Honorable Mike Synar
Chairman, Environment,
Energy and Natural
Resources Subcommittee
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

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On May 25, 1989, you requested that we evaluate the impact that the Department of Energy's (DOE) proposed organizational and management restructuring plan would have on safety oversight at DOE facilities. You specifically expressed concern that the restructuring plan, announced by the Secretary of Energy on May 19, 1989, would diminish the independent safety oversight role provided by DOE's Office of Environment, Safety, and Health, replacing it with internal oversight by line managers and external review by safety boards.

Since the proposed restructuring is not finalized, we subsequently agreed with your office to provide you with (1) information on the major events that led to the proposed restructuring and (2) a brief description of the proposed restructuring plan, including its status as of November 30, 1989. We also agreed to provide you with our general observations on the proposed plan. Furthermore, because of the importance of ensuring nuclear facility safety, we will continue to monitor DOE's progress in implementing the restructuring plan as a part of our ongoing reviews of DOE's environmental, safety, and health activities. This report summarizes our recent briefing to your office on these matters.

In summary, we identified several major events that preceded the Secretary's decision to restructure DOE's management of its nuclear facilities. The proposed restructuring plan, in concept, is designed to set in place an oversight framework, which will provide confidence in DOE's ability to operate its nuclear facilities in a safe manner. Further, on the basis of our previous work in this area as well as other

independent studies, we have identified several issues that may affect the success of the proposed restructuring plan.

HISTORICAL PERSPECTIVE AND DESCRIPTION
OF THE PROPOSED RESTRUCTURING PLAN

Since the early 1980s, a number of studies have identified numerous environmental, safety, and health problems within DOE's nuclear facilities. A common concern of these studies was DOE's inability to effectively address safety within its nuclear reactor programs. DOE did little to address these problems before 1985. However, since 1985 DOE has taken various actions including (1) establishing the Office of Assistant Secretary for Environment, Safety, and Health to provide independent internal oversight of DOE nuclear facilities and (2) creating an advisory committee for independent external safety oversight. Despite these actions, the Secretary of Energy, upon taking office in 1989, concluded that the safety oversight system at DOE was still a failure because of the confusion of responsibility for safety among its various offices. To address this problem, he proposed a new organizational and restructuring plan for nuclear and nonnuclear safety. (See section 1.)

DOE's proposed restructuring plan will (1) transfer responsibility for monitoring safety at DOE facilities among various DOE offices and (2) establish several offices within DOE to independently oversee safety. External safety boards will provide outside, independent safety oversight. One of the major principles behind the plan is that line management will be held accountable for safety as well as achieving production goals. DOE is still developing the regulations to implement the restructuring plan and has reserved the right to announce further realignments. No specific dates or milestones have been established for fully implementing the plan. (See section 2.)

OBSERVATIONS ON THE PROPOSED
RESTRUCTURING PLAN

We believe that DOE's proposed organizational and management plan, in concept, provides a framework for establishing the clear lines of responsibility needed to ensure the safe operation of DOE's nuclear facilities. We have long supported the need to improve DOE's safety management and oversight program by having (1) line management responsible for safety, (2) an effective environmental, safety, and health oversight organization to oversee how line management

is carrying out its role, and (3) an independent organization outside of DOE's control that oversees the Agency's internal safety program. Throughout the 1980s, our work in this area, as well as other independent studies, has identified problems with DOE's management of its facilities, including DOE's emphasis on production over safety, unclear lines of authority and responsibility, and DOE's inability to retain experienced technical personnel. While we believe that the proposed plan can work, these issues and problems may have an impact on the success of the plan. (See section 3.) Specifically,

- success of the plan will likely depend on the level of commitment to safety throughout the Department, particularly how the relationship between production and safety is managed;
- role clarification and clear guidance will be needed to ensure that each group clearly understands its responsibilities and relationship with the other groups;
- close coordination and interaction among the various oversight groups is important to minimize inefficiencies and maximize safety oversight effectiveness; and
- the availability of technically qualified and experienced staff to effectively carry out the oversight functions may hinder DOE's ability to implement this plan.

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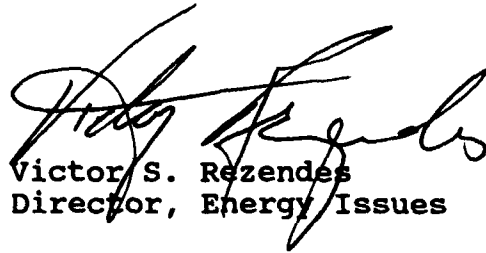
We conducted our work from July 1989 through November 1989. To complete our work, we interviewed officials at DOE headquarters and reviewed pertinent DOE documents, including congressional testimony, Secretary of Energy Notices, and DOE memorandums and correspondence. To develop an overall perspective on the potential implications of the restructuring, we relied on our previous work in the environmental, safety, and health area, as well as other independent studies.

We discussed the results of our work with DOE officials and incorporated their comments where appropriate. In general, they agreed with the information presented. As requested, we did not obtain official agency comments on this report. Unless you publicly announce its contents earlier, we plan no further distribution of this report for 30 days from the

date of this letter. At that time, we will send copies to the appropriate congressional committees; the Secretary of Energy; and the Director, Office of Management and Budget. We will also make copies available to others upon request.

If you have any questions, please contact me at (202) 275-1441. Major contributors to this briefing report are listed in appendix III.

Sincerely yours,



Victor S. Rezendes
Director, Energy Issues

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ABBREVIATIONS

DOE	Department of Energy
EMD	Energy and Minerals Division
GAO	General Accounting Office
RCED	Resources, Community, and Economic Development Division

SECTION 1

EVENTS LEADING TO THE PROPOSED RESTRUCTURING

Since the early 1980s, several studies have identified important environmental, safety, and health problems at DOE. A common concern of these studies was DOE's inability to effectively address safety within its nuclear reactor programs. DOE did little to address these problems before 1985. However, beginning in 1985, it took a number of actions to strengthen its oversight function. Despite these actions, the Secretary of Energy, upon taking office in 1989, concluded that the existing management and oversight system failed to ensure that DOE's nuclear facilities were operated in a safe manner. The failure, he concluded, was the result of a confusion of roles and responsibility for safety among various DOE organizations. In May 1989 he announced the first of a number of management and organizational changes to address the problems he had identified.

SHORTCOMINGS WERE IDENTIFIED DURING THE EARLY 1980s

Prior to 1985 a comprehensive focus on environmental, safety, and health issues did not exist within DOE's management structure. In 1979 safety and health issues at nuclear facilities became of public interest because of the accident at the Three Mile Island commercial nuclear power plant in Pennsylvania. Shortly thereafter, DOE created a task force to assess the safety programs and personnel qualifications at nuclear facilities owned by and operated for DOE. The task force's report concluded that DOE management needed to reassess safety within its nuclear reactor programs.¹ Specifically, it expressed concern that (1) inadequate attention by DOE's management may have contributed to problems in safety management at its facilities and (2) insufficient numbers of competent technical people had forced DOE to rely on its contractors to provide independent safety assurance.

In addition, as early as 1981 and again in 1983, we also reported shortcomings in DOE's oversight of environmental, safety, and health matters. In 1981 we highlighted deficiencies in DOE's programs for worker protection, emergency preparedness, facility safety, and environmental monitoring at all types of DOE nuclear facilities.² We also reported that these problems indicated a need for DOE to make major organizational changes. Furthermore, we

¹A Safety Assessment of Department of Energy Nuclear Reactors
(DOE/US-0005, March 1981).

²Better Oversight Needed for Safety and Health Activities at DOE's Nuclear Facilities (EMD-81-108, Aug. 4, 1981).

recommended that DOE set up a separate independent, internal office, reporting directly to the Under Secretary, to oversee environmental, safety, and health matters. In our 1983 report, we again concluded that a major cause of DOE's safety problems was its organizational structure, and we continued to argue for a separate oversight office.³ Specifically, we noted that DOE was not providing its safety and health officials with the authority, independence, and visibility needed to ensure that DOE's facilities were operated in a safe manner.

In September 1985 DOE began taking some corrective actions. For example, it established the Office of Assistant Secretary for Environment, Safety, and Health. This newly created office was to have oversight responsibility, but the safety and health functions were not legislatively mandated. At the same time, DOE announced a number of other initiatives to strengthen the Department's environmental, safety, and health efforts. The more important initiatives included revising DOE orders that govern the conduct of the Department's environmental, safety, and health activities and conducting safety appraisals and environmental surveys at DOE facilities. These appraisals and surveys are particularly important because they are intended to provide management with the necessary information for setting priorities for corrective action. The Assistant Secretary was also given the authority to shut down a plant if a "clear and present danger" exists that threatens the safety of the public.

CHERNOBYL ACCIDENT LED TO MORE SAFETY ASSESSMENTS

Shortly after the April 1986 nuclear accident at the Chernobyl Nuclear Power Station in the Soviet Union, DOE requested the National Academy of Sciences and National Academy of Engineering to form a committee to conduct an independent assessment of safety issues at DOE's larger reactors. The committee reported in late 1987 that DOE's management fell short in attempting to balance production and safety responsibilities.⁴ In light of these conflicting responsibilities, the committee recommended the establishment of an independent, external safety oversight committee. This study also noted that (1) DOE had a problem in retaining technically qualified and experienced staff and (2) DOE had not been able to properly perform safety oversight because of the imbalance between the technical capabilities and experience of the contractors and DOE's staff. Furthermore, the report concluded

³DOE's Safety and Health Oversight Program at Nuclear Facilities Could Be Strengthened (GAO/RCED-84-50, Nov. 30, 1983).

⁴Safety Issues at the Defense Production Reactors (National Academy Press, Oct. 1987).

that DOE had not clearly articulated, documented, and implemented a safety objective for the operation of its production reactors.

DOE responded to the committee's report in late 1987 by establishing the Advisory Committee on Nuclear Facility Safety to conduct independent safety oversight of DOE's nuclear facilities. Prior to the establishment of this committee, we testified that the elements required for independent oversight at DOE facilities are (1) independence, (2) technical expertise, (3) ability to perform reviews of facilities, (4) clear authority to require DOE to address findings and recommendations, and (5) a system to provide the public access to the findings and recommendations.⁵ We noted in 1988 that the Advisory Committee on Nuclear Facility Safety did not meet this criteria because it is not structured distinctively and separately from DOE and does not have the authority to require DOE to address its findings and recommendations.⁶ In this report, we also recommended to the Congress that it legislatively establish an independent oversight function to oversee DOE's nuclear defense facilities. After deliberation, the Congress in late 1988 directed that the Defense Nuclear Facilities Safety Board be established to provide independent, external oversight of DOE facilities. This Board, whose members were recently confirmed by the Congress, has begun hiring personnel to carry out its legislative mandate.

THE SECRETARY OF ENERGY DETERMINED SAFETY OVERSIGHT TO BE A FAILURE

Despite the various actions taken by DOE over the years to improve its safety oversight of nuclear facilities, the Secretary of Energy, on taking office in 1989, determined that the existing safety oversight system at DOE was a failure. Appendix I illustrates this organizational structure. The major cause, he determined, was confusion among the roles of DOE's headquarters management, its field organization, and the Office of Environment, Safety, and Health--the result of an absence of clear lines of authority and responsibility, dilution of accountability, and an absence of adequate specificity in DOE orders. Consequently, safety was viewed as the responsibility of the Assistant Secretary for Environment, Safety, and Health even though DOE's operational management was designated in DOE directives as being responsible. As a result, several departmental elements were thought to be responsible for safety of operations, but no single individual could be held accountable.

⁵Key Elements of Effective Independent Oversight of DOE's Nuclear Facilities (GAO/T-RCED-87-32, June 16, 1987).

⁶Nuclear Health and Safety: Oversight at DOE's Nuclear Facilities Can Be Strengthened (GAO/RCED-88-137, July 8, 1988).

Another factor contributing to the failure of the existing oversight system was the emphasis management placed on production projects and issues at the expense of safety issues. We noted in 1985, and again in 1989, that DOE placed more emphasis on a contractor's performance in achieving production goals than on environmental, safety, and health matters when it evaluated the contractors for award fees.⁷ The National Academy of Sciences' committee report made a similar comment that the "Department's approach to management falls short of reasonable expectation in attempting to cope with the mix of production and safety responsibilities." In a February 1989 conference in Tucson, Arizona, the Deputy Assistant Secretary for Safety, Health, and Quality Assurance also acknowledged that "too often in the past, production has taken priority over safety considerations...." This priority was also reflected in the budgeting process where, according to the Deputy Assistant Secretary, funds requested for production items had traditionally been ranked higher in importance than safety items.

To address these problems among others, the Secretary of Energy determined that line management must be held wholly accountable for nuclear safety and must develop and maintain the necessary technical capability to carry out its responsibilities. In doing so, line management would then be responsible for both production and safety, requiring them to balance these often competing goals.

To implement his initiative, the Secretary directed the first of a number of organizational and management changes in May 1989 to be followed by longer-range realignments. Additional clarifications and changes were announced in September 1989. The new organization and management restructuring plan, as it relates to nuclear facility safety oversight, is discussed in section 2.

⁷Environment, Safety, and Health: Environment and Workers Could Be Better Protected at Ohio Defense Plants (GAO/RCED-86-61, Dec. 13, 1985) and Nuclear Health and Safety: DOE's Award Fees at Rocky Flats Do Not Adequately Reflect ES&H Problems (GAO/RCED-90-47, Oct. 23, 1989).

SECTION 2

PROPOSED REALIGNMENT OF SAFETY FUNCTIONS AT DOE

The objective of DOE's proposed restructuring plan is to ensure safe operations at DOE facilities. Specifically, DOE is trying to instill a "safety culture" throughout DOE and its contractors while establishing clear lines of responsibility for safety. To accomplish these objectives DOE's restructuring plan will transfer responsibility for monitoring and overseeing safe operations at DOE facilities among various DOE organizations, while external safety boards will provide outside, independent safety oversight. According to DOE officials, safety responsibilities will not be transferred until the offices assuming such responsibility have the technical capability to carry out the tasks. Until these functions are transferred, they will be carried out under the existing alignment. As of November 30, 1989, specific dates for full implementation of this plan had not been established.

OBJECTIVES AND PRINCIPLES OF THE RESTRUCTURING PLAN

DOE's restructuring plan is designed to provide a framework to ensure safe operations of DOE nuclear facilities. This framework, according to the Secretary of Energy, will provide confidence in DOE's ability to operate its facilities in a safe manner. To accomplish this overall objective DOE is setting into place an oversight system that establishes clear lines of responsibility for safety. Furthermore, DOE is trying to instill an attitude throughout DOE and its contractors toward safe operations of DOE's nuclear facilities.¹ According to the Under Secretary of Energy, DOE will not be able to competently manage its facilities unless such a change in attitude is accomplished. The 1987 National Academy of Sciences committee report made a similar comment that "the technological vigilance required to assure safety at the DOE reactors cannot be generated from organizational structure alone. . . safety is a reflection of institutional commitment and capability. Leadership at the policy-making level is essential, and dedication to safety must permeate the Department of Energy." Further, the Chairman of DOE's Advisory Committee on Nuclear Facility Safety stated that the attitude of reactor operators is actually a larger problem than is the adequacy of the plant safety equipment, and that most members of his Advisory Committee were "very skeptical" that the plant operators' attitudes could be

¹We plan to report on the effectiveness of DOE's efforts to bring about a change in the "safety culture" at the Savannah River plant in a separate report.

changed sufficiently by the end of 1989 to provide assurances of safety.²

In developing the restructuring plan, DOE has employed three guiding principles. First, line management must be held responsible for safety. That is, safety at DOE facilities will not be improved unless line management and the contractors recognize that they have a day-to-day responsibility for carrying out DOE directives relating to environmental, safety, and health matters as well as achieving production goals. DOE management contends that without line management accountability, no amount of oversight can assure the public that DOE is serious about safety. Consequently, DOE is restructuring the relationship between the headquarters program offices and the field so there is a clear line of responsibility for safety. Furthermore, DOE management contends that the line managers must develop and maintain the necessary technical capability to carry out their responsibilities. Second, the performance of DOE's headquarters program offices, its field offices, and its contractors must be subject to surveillance by independent organizations. The principal task of this independent oversight--whether internal to DOE or external to it--must be to promote safety by line management. Further, it must serve as a separate feedback mechanism to ensure identification of problems and their expeditious resolution by line management. And last, DOE directives must be technically sound and upgraded to set the standards of performance.

PROPOSED REALIGNMENT

Under this restructuring plan, DOE is realigning its oversight functions to provide a combination of internal oversight; independent, internal oversight; and independent, external oversight to ensure nuclear and nonnuclear safety at DOE's facilities. The proposed restructuring plan (1) realigns DOE's existing internal and independent, internal safety oversight functions and (2) establishes several offices within DOE to independently oversee safety. External safety boards will provide outside, independent safety oversight. This realignment of oversight is illustrated in appendix II.

Specifically, under DOE's restructuring plan, line management, in addition to carrying out its production and research responsibilities, will provide day-to-day, shift-by-shift oversight of contractors for nuclear and nonnuclear safety performance. These management offices will have responsibility for such functions as appraisals of nuclear safety, compliance followup,

²Statement made at a December 1988 joint meeting of the Committee on Military Affairs and Justice and the Committee on Nuclear Technology of the Association of the Bar of the City of New York in reference to the reopening of the Savannah River reactors.

implementation of directives, and verification of contractor compliance. DOE headquarters program offices will be responsible for ensuring that the field offices are requiring their contractors to comply with DOE standards.³

Several DOE offices will then oversee DOE's line management safety performance. Within three DOE headquarters offices for nuclear facilities and programs, an Office of Nuclear Self-Assessment, reporting to the program office's senior official, will be established to perform independent design, construction, and operational evaluations of nuclear facility safety. These offices will not have production responsibility and will not replace the functions carried out by line management. The offices will separately check, on a sample basis, the performance of nuclear safety at the DOE facilities. The Office of Nuclear Safety is also being established to advise the Secretary of Energy on whether line management and its self-assessment functions are adequately ensuring nuclear safety and, as such, will provide independent, internal oversight on nuclear safety issues. This office will not have any line responsibility. The Office of Environment, Safety, and Health will no longer have nuclear safety responsibility but will continue to provide independent, internal departmental oversight at all DOE facilities for nonnuclear issues, including aspects such as environmental protection, occupational safety and health, and security and safeguards. According to the Under Secretary of Energy, the Office of Nuclear Safety will essentially assume the Office of Environment, Safety, and Health's responsibility for independent, internal oversight for nuclear safety.

Independent, external oversight for nuclear safety matters will be conducted by either the Advisory Committee on Nuclear Facility Safety or the recently mandated Defense Nuclear Facilities Safety Board. According to DOE officials, the Advisory Committee on Nuclear Facility Safety will cease its existing independent, external oversight at the facilities under the statutory purview of the Defense Nuclear Facilities Safety Board once the board determines it is ready to assume independent oversight responsibilities. However, DOE intends to continue using the Advisory Committee on Nuclear Facility Safety for individual oversight of nuclear and non-nuclear activities where DOE would benefit from its oversight. The Defense Nuclear Facilities Safety

³DOE is also restructuring its management of environmental cleanup, compliance and waste management activities identified in the Five-Year Plan. On October 4, 1989, DOE approved the establishment of the headquarters Office of Environmental Restoration and Waste Management. This Office will provide centralized management for waste management operations, environmental restoration, and applied research and development programs and activities, including program policy guidance to its field offices.

Board statutory authority includes conducting on-site inspections, stationing resident inspectors at DOE sites, performing critical reviews of DOE standards, and providing recommendations necessary for safe operations.

Aside from oversight, development and coordination of DOE policy and directives for nuclear and nonnuclear safety will be the responsibility of several DOE offices. These fundamental directives and orders establish the DOE policy for the standards from which line management judges the contractors' performance. The Office of Environment, Safety, and Health will develop and coordinate departmental policy and directives related to environmental protection, radiation and worker safety, and those aspects of public health and safety that deal with epidemiology and radiological protection. The Office of Nuclear Energy will develop and coordinate departmental policy and directives for nuclear reactors and non-reactor nuclear facility safety, which will be reviewed and concurred in by the Office of Nuclear Safety.

STATUS OF REALIGNMENT

According to DOE directives and senior DOE officials, the transfer of safety oversight responsibilities will not occur until the offices assuming such responsibilities have the technical capability to carry out the tasks. Even though the Secretary intends to place high priority on achieving this technical capability for each office, he acknowledges that it will likely be a slow process because of budgetary and resource constraints. DOE is still in the process of (1) determining the relevance of the Assistant Secretary for Environment, Safety, and Health's shutdown authority, (2) identifying, hiring, and training technically qualified personnel, and (3) defining and documenting specific roles and responsibilities of the various oversight functions. During the transition, responsibilities and authorities for oversight will continue to be carried out under the current DOE directives, except where a phased reassignment of a function is mutually agreed upon. Further, the Secretary has stated that longer-range alignments, which will encompass all aspects of DOE, will be promulgated and phased in as they are developed. Although the Under Secretary of Energy stated that he would have liked complete transfer of the safety oversight functions by December 31, 1989, this did not occur and no specific dates or milestones for completing the transfer have subsequently been established.⁴

⁴DOE also plans to review issues and recommendations discussed in a recent report it requested from the National Research Council. This report, The Nuclear Weapons Complex: Management for Health, Safety, and the Environment (National Academy Press, Dec. 21, 1989), states, among other things, that the recent organizational changes may serve to limit the effectiveness of the oversight function. Also, it states that it is unclear whether the recently

DOE has already transferred some of the responsibility and authorities outlined in its restructuring plan. On June 1, 1989, the Office of Defense Programs assumed full responsibility for the operational program and activities at DOE's Savannah River plant. Specifically, offices for reactor restart have been established and are reporting to the Assistant Secretary for Defense Programs. Also, the DOE field offices at the Rocky Flats plant in Colorado have now begun to report to the Office of Defense Programs instead of the DOE Albuquerque operations office. Furthermore, about 9 percent of the safety staff of the Office of Environment, Safety, and Health, as well as all three environmental, safety, and health site representatives at DOE's Savannah River Site, were temporarily detailed to the line organization for the restart of the Savannah River reactors. According to the Under Secretary, approximately 16 percent of the Office of Environment, Safety, and Health authorized personnel slots will be transferred to the Office of Nuclear Energy in January 1990.

announced Nuclear Self-Assessment offices will eventually be able to perform the outlined oversight functions, because few details about their actual operations are available.

SECTION 3

OBSERVATIONS

We believe that DOE's proposed organizational and management plan, in concept, provides a framework for establishing the clear lines of responsibility needed to ensure the safe operation of DOE's nuclear facilities. It is encouraging to see that the plan includes a combination of internal; independent, internal; and independent, external safety oversight. We have long supported the need to improve DOE's safety management and oversight program by having (1) line management responsible for safety, (2) an effective environmental, safety, and health oversight organization to oversee how line management is carrying out its role, and (3) an independent organization outside of DOE's control that oversees the Agency's internal safety program.

In reviewing our previous work in this area as well as other independent studies, we have made several observations concerning issues that could have an impact on the success of the plan. First, because the failure of the current safety oversight system resulted from the absence of clear lines of authority and responsibility, role clarification and clear guidance will be needed to ensure that each group clearly understands its responsibilities and relationship with the other groups. For example, due to the potential hazard to the public and environment from a nuclear accident, it is imperative that the office and/or staff with authority to shutdown a nuclear facility be clearly defined. Likewise, since the Office of Environment, Safety, and Health will no longer be responsible for nuclear safety issues, it is important that the roles and responsibilities of the new Office of Nuclear Safety be clearly defined. While the restructuring plan states that the Office of Nuclear Safety will advise the Secretary on whether line management and its self-assessment functions are adequately ensuring nuclear safety and states that the office will have broad responsibilities to monitor and audit all aspects of nuclear safety, it does not discuss these responsibilities in great depth. More importantly, a number of staff from the Office of Environment, Safety, and Health have already been temporarily detailed to the line organization, but the Office of Nuclear Safety has yet to be fully staffed. This seems to be inconsistent with DOE directives that state that the offices with safety oversight responsibilities must have the staff with the technical capability to carry out the tasks. It further raises the question of how effective DOE's independent, internal safety oversight is at this time. We recognize that the organizational restructuring is not complete and that the congressionally mandated external oversight board, the Defense Nuclear Facilities Safety Board, is just now beginning operations. However, it has been over 6 months since the restructuring plan was announced, and basic issues such as role clarification have not been resolved nor has clear guidance been

issued. According to the Under Secretary of Energy, DOE initially perceived the implementation of this plan to occur rather quickly; however, due to revisions of the plan and limitations in obtaining technically qualified personnel, the implementation of the plan has been a slow process.

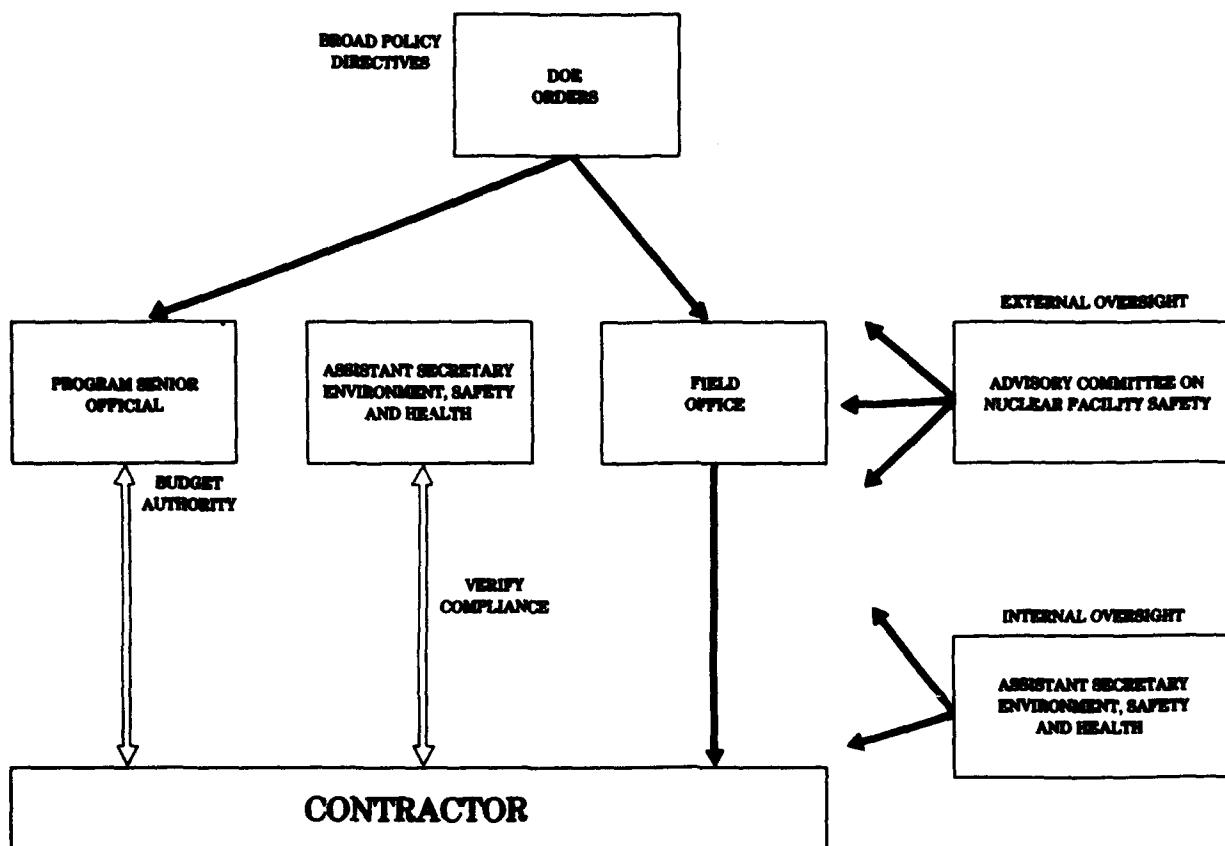
Second, success of the plan will likely depend on the level of commitment throughout the Department to the concept of a "safety culture." As pointed out by the National Academy of Sciences in 1987, assurance of safety at DOE's reactors cannot be generated by organizational restructuring alone; a change in attitude towards safety will be needed as well. However, as noted by the Chairman of DOE's Advisory Committee on Nuclear Facility Safety, instilling the right attitude towards safety and self-assessment will probably be a slow process.

Third, success of the restructuring plan will likely depend on the availability of technically qualified and experienced staff to effectively carry out the oversight functions. As acknowledged by DOE, there is currently a shortage of such staff and competing demands for them may hinder DOE's efforts in attracting them. More importantly, the competition is not just limited to private industry working in these areas; the competition extends to other organizations within the federal government as well as within DOE. Throughout the 1980s, studies have shown that DOE has not been able to properly perform safety oversight because of the imbalance of the technical capability and experience between DOE and contractor staffs. Consequently, the positive concept of the proposed restructuring plan may not, in itself, ensure the effective management and oversight that DOE's renewed emphasis on safety will require.

Fourth, because the restructuring plan is still undergoing change and will entail a number of staff and function moves over a period of time, it is important that the various oversight groups coordinate and interact closely. Close coordination and interaction should help to minimize any inefficiencies and maximize safety oversight effectiveness, especially during the transition period of the proposed realignment. For example, the transition period provides DOE with the opportunity to establish an early positive working relationship, rather than an adversarial relationship, with the congressionally mandated Defense Nuclear Facilities Safety Board. DOE officials agree that coordination and close interaction among various oversight groups are important and have told us that they have already informally met with some of the Board members. We believe this dialogue should be continued to enhance both the Board's ability to quickly gain an understanding of DOE operations and DOE's ability to respond more efficiently, effectively, and quickly to the Board's observations and recommendations.

Finally, although no specific dates have been set to fully implement the realignment, the establishment of clear milestones may provide a smoother transition. As noted, although the plan was announced approximately 6 months ago, DOE has yet to define and document specific roles and responsibilities of the various oversight functions. Without such milestones, these decisions can be postponed indefinitely, and management's efficiency and effectiveness in meeting planned goals and objectives cannot be judged. However, while we believe that clear milestones can provide a smoother transition, we recognize, as pointed out by DOE, that the Department's ability to meet such milestones may be hindered by the extent to which technically qualified and experienced staff are available to effectively carry out the safety oversight functions.

**CURRENT ALIGNMENT OF SAFETY
OVERSIGHT FUNCTIONS AT DOE FACILITIES**

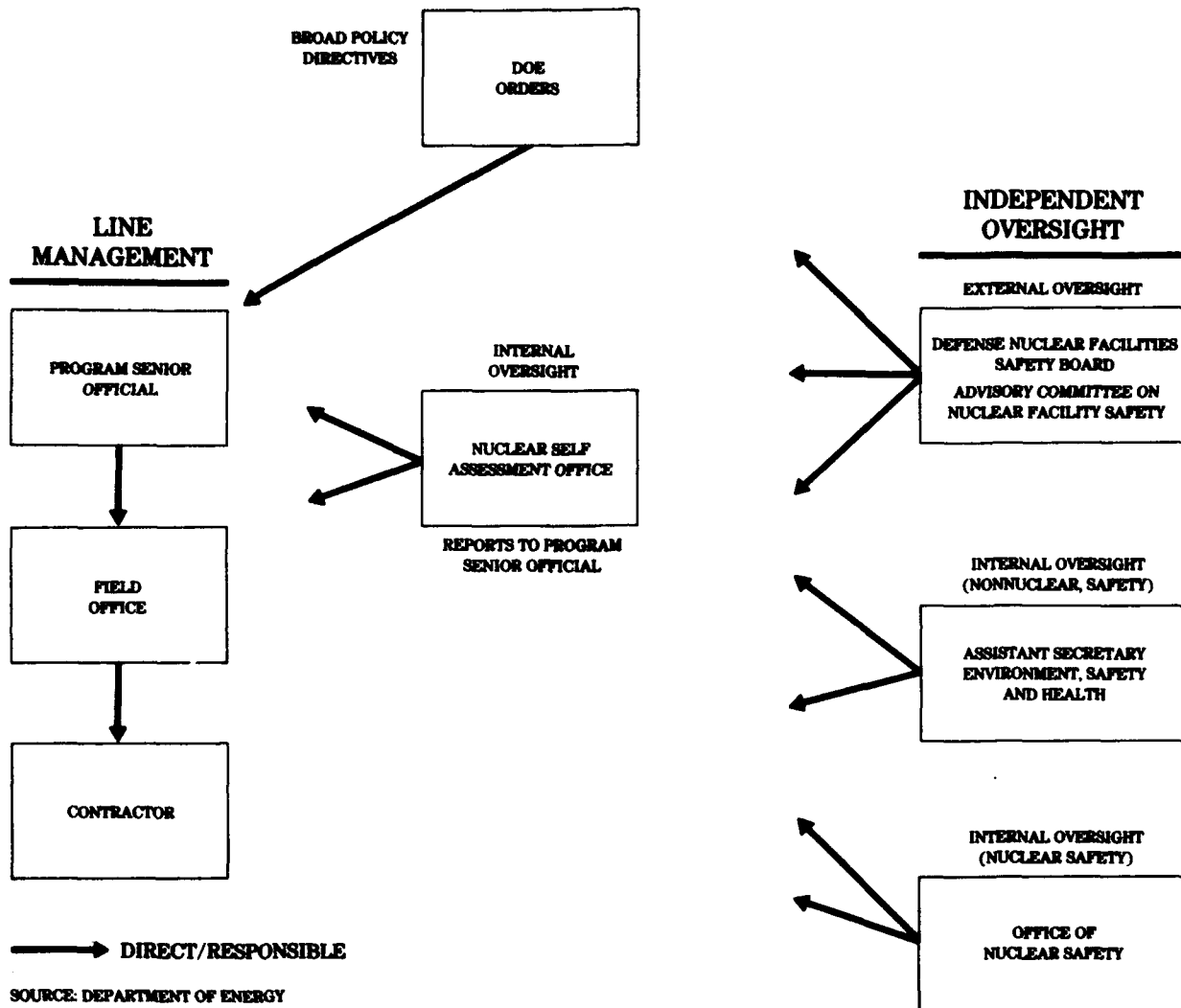


————→ DIRECT/RESPONSIBLE

↔ INTERACT

SOURCE: DEPARTMENT OF ENERGY

PROPOSED REALIGNMENT OF SAFETY
OVERSIGHT FUNCTIONS AT DOE FACILITIES



MAJOR CONTRIBUTORS TO THIS BRIEFING REPORT

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